

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
30 October 2003 (30.10.2003)

PCT

(10) International Publication Number
WO 03/090381 A1

(51) International Patent Classification⁷: **H04B 07/155**

(74) Agent: **YOU ME PATENT & LAW FIRM**; Teheran Bldg., 825-33, Yoksam-dong, Kangnam-ku, 135-080 Seoul (KR).

(21) International Application Number: **PCT/KR02/01620**

(22) International Filing Date: 28 August 2002 (28.08.2002)

(25) Filing Language: Korean

(26) Publication Language: English

(30) Priority Data:
2002/21979 22 April 2002 (22.04.2002) KR

(71) Applicant (for all designated States except US): **KT-FREETEL CO., LTD.** [KR/KR]; 890-20, Daechi-dong, Gangnam-gu, 135-280 Seoul (KR).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **CHOI, Wan** [KR/KR]; 106-1803 Byeoksan apt., Siheung 2-dong, Geumcheon-gu, 153-764 Seoul (KR).

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

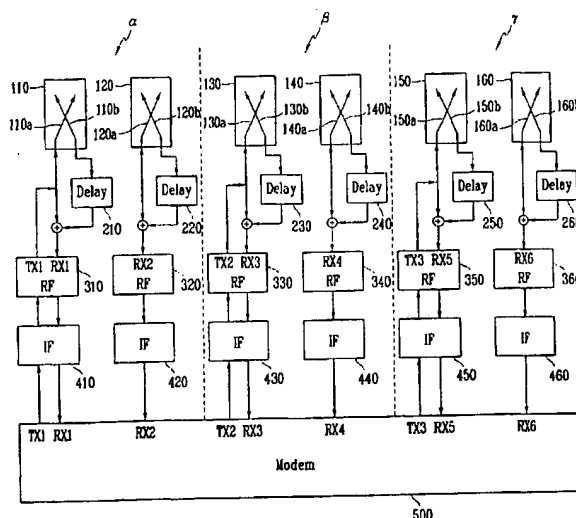
(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

[Continued on next page]

(54) Title: **BASE STATION AND METHOD FOR RECEIVING AND PROCESSING SIGNAL IN BASE STATION**



(57) Abstract: Disclosed is a method for simplifying a signal processing process of a base station that receives signals through four branches using two two-branch polarized antennas for each sector. The base station receives signals through first and second branches of the first polarized antenna and third and fourth branches of the second polarized antenna, time-delays the signals received at the second and fourth branches so as to distinguish an offset thereof from an offset of the signals received at the first and third branches, adds the signal received at the first branch and the signal received at the second branch and time-delayed, and adds the signal received at the third branch and the signal received at the fourth branch and time delayed. A modem processor separates an offset distinguishable signal from the added signals.

WO 03/090381 A1